Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact Upon the	)	**MM Docket No. 87-268**
Existing Television Broadcast	)	
Service	)	
	)	
Fifth Further Notice of	)	
Proposed Rule Making	)	

COMMENTS OF DOLBY LABORATORIES

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I. Introduction

Dolby Laboratories ("Dolby") respectfully submits these comments on the Commission's Fifth Further Notice of Proposed Rule Making ("NPRM") in its Advanced Television ("ATV") proceeding.

Dolby Laboratories is an acknowledged world leader in the field of audio signal processing technology. Dolby technology is widely used in the recording, motion picture, broadcast, and consumer electronics industries. The scope of Dolby's involvement in these industries is broad. Dolby products, staff and technology are often involved from the point of original sound recording, through editing and post-production, to release (in the case of motion picture films) in commercial cinemas. Our involvement continues with production of appropriate versions for video release (e.g., on VHS, Laserdisc, DVD, or broadcast media). When the entertainment product arrives in the home our presence is again felt through our consumer technologies which have, in large measure, facilitated the significant growth of the "home theater" market (a market which is eagerly awaiting the arrival of high quality ATV).

Dolby consumer technologies have been licensed by more than 300 companies worldwide. More than 575 million consumer products incorporating licensed Dolby technology have been manufactured. Dolby has extensive involvement in the design of many new consumer electronics systems and is an active participant in the activities of

standards bodies the world over (e.g., ATSC, ACATS, ANSI, AES, DAVIC, EIA, IEC, ITU-R, MPEG, SMPTE, etc.).

Dolby's involvement in the ATV area began prior to the petition which established this rule making,[1] when we were approached by companies who were doing advanced television research. These companies sought our help, advice, and technology for the audio portion of the systems they were designing. Over the many years of ATV development activity, technology has significantly advanced. In the area of audio technology, Dolby has led these advancements.

In 1991, Dolby introduced a digital sound system for the cinema which offered "5.1 channels" (i.e., left, center, right, left surround, right surround channels plus a low frequency effects channel) Recognizing that the audio coding technology used in this system ("AC-3") would be of use in ATV applications, we brought the technology to the attention of the system proponents, the ATSC, and ACATS. With assistance of ATSC members, Dolby also proposed the basic 5.1-channel format to ITU-R Task Group TG 10/1 (Multichannel Audio). The U.S. position was adopted and is reflected in ITU-R Recommendation BS.775-1.

In 1992, the Dolby AC-3 system was adopted by several of the individual ATV proponents, and in 1993, it was accepted by the Grand Alliance and ACATS. In 1994, AC-3 was adopted as a standard and documented by the ATSC (document A/52). In 1995, AC-3 received international recognition by being included in ITU-R Recommendation BS.1196-1. Recently, in separate but concurrent decisions, AC-3 and other portions of the ATSC DTV Standard were adopted by DAVIC[2] for the DAVIC v1.2 Specification. The AC-3 system is also being used for digital multichannel audio delivery via CATV and satellite transmission media, and in storage media such as Laserdisc and DVD.

II. The ATSC DTV Standard

Dolby Laboratories had intense involvement in the ATSC DTV standard setting process. We can unequivocally state that although the competition was intense, our experience was that the process was open and fair. The view has been expressed in the NPRM that concerns about specific elements of the ATSC DTV Standard "cannot be dismissed out-of-hand." It is our experience that no concerns which were brought before any of the relevant committees during this work have ever been dismissed out-of-hand. Some concerns were dismissed after receiving due technical consideration in an open forum. We find it disturbing that some, whose ideas were perhaps not accepted by the technical peer review process, are now attempting to sidetrack the ATSC DTV Standard by going outside of the accepted and agreed upon technical standards setting process. The Commission must not let the careful and well considered standards development work of ACATS, ATSC and some of the finest engineers in the country be sidetracked or delayed in being put into force.

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[1] Notice of Inquiry in MM Docket No. 87-268, 1987.

[2] Digital Audio Visual Interactive Council, New York meeting, June 1996.

III. The Commission Should Mandate the ATSC DTV Standard

The NPRM seeks comment on the "Proposal." (NPRM, ¶37) to adopt the ATSC DTV Standard and to require use of each element of the ATSC DTV Standard by digital television licensees.

Dolby strongly endorses the comments filed on this question by the ATSC and emphatically endorses the Commission's proposal to adopt and to require digital television licensees to use each element of the ATSC DTV Standard. The rationale for this decision is repeatedly expressed throughout the NPRM itself and in the attached statements of the Commissioners.

The Commission is correct in its rationale that consumers and industry want and will benefit from the strong dose of certainty that will likely follow a Commission mandate of the ATSC DTV Standard. This is especially true in this modern world where multi-thousand dollar investments in home computer electronic systems become greatly devalued in just a few years as hardware and software (de-facto) standards frequently change. One can only imagine the reaction of those consumers who have been anticipating this new high quality DTV service, if they were to learn that the new system received only a lukewarm endorsement by the Commission. Consumer uncertainty regarding the ATSC DTV Standard would seriously impair the market penetration of ATV products and would unnecessarily delay completion of the transition to DTV and the recovery of the NTSC spectrum.

The time for theoretical "what if..." concerns has past. A fully supportive mandate for the full ATSC DTV Standard from the FCC is essential.

IV. The Risk of Obsolescence

Dolby also concurs with the statement of the ATSC that concerns regarding potential obsolescence are greatly exaggerated. The time to set a standard is when the technology has reached a plateau, i.e., when further substantial and rapid gains are not immediately in sight. In the case of audio coding technology, while we can foresee that some further improvements in coding efficiency could be obtained, this benefit would come at the expense of greater circuit complexity and cost to consumers. The approximately five year old AC-3 technology still appears to be a very good tradeoff between coding efficiency and cost. It is difficult to predict what significant technical developments will occur in the future. New developments can be dealt with if and when they occur, but the "what if" potential of new technology should not freeze the Commission into inaction in this very important matter.

V. Compatibility and Interoperability

In the NPRM (at ¶62) the Commission asks what actions it might take to facilitate interoperability. Dolby believes that a strong mandate from the Commission in favor of the ATSC DTV Standard would greatly benefit interoperability. While those making technology choices for other media have monitored the ACATS process and development of the Grand Alliance system, a Commission mandate of the ATSC DTV Standard would likely more strongly influence others making technology choices for similar applications. Something less than a whole-hearted endorsement by the Commission would be counter productive in expanding the worldwide influence of the ATSC DTV Standard, thus negatively affecting potential interoperability with other applications.

VI. U.S. Competitiveness

Use of the ATSC DTV Standard in other countries will yield benefits to U.S. consumers and industries. Dolby has been involved in efforts to promote the ATSC DTV Standard internationally, including work in DAVIC, ITU-R, and MPEG. There is a strong perception outside the U.S that the Commission will, of course, mandate use of the Standard. While a small delay in approval while the Commission considers important inputs can be explained, a failure to mandate the system for use in the U.S. soon could cripple efforts to export the Standard.

VII. Licensing of Technology

Dolby Laboratories has a long and successful history in licensing of audio signal processing technologies to many of the world's leading consumer electronics companies. As part of the standardization of AC-3 by the ATSC, Dolby submitted a patent policy statement in accordance with ANSI policy. The statement that Dolby will license AC-3 technology under reasonable term and conditions includes both pending as well as relevant issued patents. We are unaware of any other concerns which would require consideration by the Commission.

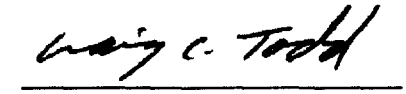
VIII. Conclusion

In summary, Dolby Laboratories respectfully requests that the Commission take prompt and decisive action to:

- fully embrace the work and recommendations of ACATS; and
- to reject last minute challenges to the remarkable consensus that has been achieved over an eight year period by our nation's best technical experts in an open and fair process of peer review; and
- to mandate use of the ATSC ATV Standard by broadcast licensees based on the high level of consensus and support from broadcasters and equipment manufacturers, both for the Standard itself and for the Commission's proposed mandate for its use; and

- to follow the recommendations of the ATSC by mandating use of all elements of the ATSC DTV Standard which is internationally recognized to deliver the finest quality pictures and sound; and
- to provide the certainty needed to justify the substantial investments required to ensure the market success of ATV and to eventually reclaim existing NTSC spectrum; and
- to provide the credibility needed to successfully promote U.S. ATV technology in other parts of the world.

Respectfully submitted,



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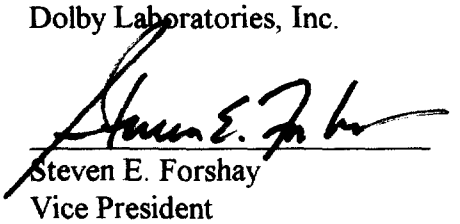

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